

### REMARKS

According to the Office Action of August 8, 2008, claims 13, 15-29, 32-36 have been examined on their merits and rejected. Claims 14, 30 and 31 have been previously cancelled. In response to the Office Action, Applicants amend claims 13, 15-19, 24-27, 29, 32-33 and 35, add new claims 37-46 and cancel claim 28. Since claim 28 has been cancelled, all rejections asserted against it are now moot, and are not addressed in this Amendment. In view of these amendments and the remarks below, Applicants respectfully request that the asserted rejections be reconsidered and withdrawn.

#### Priority

On page 2, the Office Action contends that claim 33 is not supported by the priority application (EP App. No. 02078684.4). Claim 33, as amended, recites: "The food composition according to claim 28, wherein the  $\alpha$ -glucan contains  $\alpha$  (1,3) and  $\alpha$  (1,6) linkages." This claim is supported by EP App. No. 0207864.4 at paragraph 24, which states:

The glucans to be used according to the invention contain, as a result of their branched nature, at least two types of linking one AGU to another. The type may be 1,2-linking, 1,3-linking, 1,4-linking or 1,6-linking. .... *The glucans may also contain 1,3 and 1,6 linkages ...*[Emphasis added.]

Since the priority application provides support for a food composition wherein the  $\alpha$ -glucan contains  $\alpha$  (1,3) and  $\alpha$  (1,6) linkages, claim 33 should be afforded the benefit of the priority application's filing date. For this reason, Applicants respectfully request that this objection be withdrawn.

#### Information Disclosure Statement

On page 2, the Office Action states that "[o]nly the English abstracts of documents 6, 8, 13 and 14 of the IDS submitted September 4, 2007 were considered." Applicants request that appropriate consideration of these documents be made. According to MPEP § 609.05(b),

The information contained in information disclosure statements which comply with both the content requirements of 37 CFR 1.98 and the requirements, based on the time of filing the statement, of 37 CFR 1.97 will be considered by the examiner. Consideration by the examiner of the information submitted in an IDS

*means that the examiner will consider the documents in the same manner as other documents in Office search files are considered by the examiner while conducting a search of the prior art in a proper field of search. ... [Emphasis added.]*

Information which complies with requirements as discussed in this section but which is in a non-English language will be considered in view of the concise explanation submitted (see MPEP § 609.04(a), subsection III.) *and insofar as it is understood on its face, e.g., drawings, chemical formulas, in the same manner that non-English language information in Office search files is considered by examiners in conducting searches. .... [Emphasis added.]*

Accordingly, Applicants request that documents 6, 8, 13 and 14 be considered in the same manner as other documents in Office search files, and that the drawings, among other things, be considered as well.

#### **Rejection under 35 U.S.C. § 102**

Claims 13, 15-21, 23-26, 28 and 32 have been rejected under 35 U.S.C. § 102(b) as anticipated by a typical carnivorous diet as evidenced by Unisa.edu and Elmhurst.edu.

The Patent Office must establish that "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). Thus, the Patent Office must establish that the reference is prior art. According to MPEP § 2128, "prior art disclosures on the Internet or on an on-line database are considered to be publicly available as of the date the item was publicly posted." In this case, there is no evidence that either reference pre-dates the priority date of this application. Therefore, a *prima facie* case of anticipation has not been established.

Furthermore, claims 13, 15-21, 23-26, 28 and 32 exclude glycogen or recite that the food composition is a liquid composition. Claim 13 has been amended to recite "wherein the  $\alpha$ -glucan comprises reutran." Claim 19 is directed to a glucan produced from sucrose. Claims 15-18 depend from claims 19. Claims 21-23 depend from claim 13. Claims 24-26 and 32 have been amended to depend from claim 29, which was not rejected under 35 U.S.C. § 102 and has

been amended to independent form retaining the limitations of base claim 28 and the recitation that the food composition is a liquid composition.

Since claims directed to reutran or liquid food compositions have not been rejected under this section, this rejection should be withdrawn.

Additionally, Applicants respectfully disagree with the statement on page 4 of the Office Action that the method of producing the  $\alpha$ -glucan carries no patentable weight. This statement is believed to be directed against claim 19. Claim 19 is not a product claim, but instead a method claim. More importantly, the production starting from sucrose implies that the product will at least partly contain a terminal sucrose unit, which distinguishes it from a product starting from, for example, glucose, such as glycogen. Thus, the recitation of "wherein the  $\alpha$ -glucan is produced by enzymatic glucosyl transfer from sucrose" further defines  $\alpha$ -glucan.

#### **Rejections under 35 U.S.C. § 103**

Claims 13, 15-23, 24-29 and 32-35 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Van Geel-Schutten *et al.* (Applied and Envir. Microbiol., (1999) 65(7): 3008-3014). The present invention is directed to a method of inducing satiety and satiation by administering a branched  $\alpha$ -glucan having a degree of branching of at least 8%. On pages 5 and 6, the Office Action contends that this invention is obvious in view of Van Geel-Schutten, but does not establish that Van Geel-Schutten teaches the recited degree of branching, or that this would be obvious to one of ordinary skill in the art. Thus, the Office Action fails to establish a *prima facie* case of obviousness based on Van Geel-Schutten.

On page 5, the Office Action contends that Van Geel-Schutten teaches that polysaccharides (cellulose, pectin, and starch) are used in the food industry, and that exopolysaccharides (EPS) produced from lactic acid bacteria are more desirable because these EPSs are produced by food-grade organisms with GRAS ("generally recognized as safe") status. Van Geel-Schutten states that

A variety of high-molecular weight polysaccharides produced by plants ..., seaweeds ..., and bacteria ... find applications as *viscosifying, stabilizing,*

*emulsifying, gelling or water-binding agents* in food and nonfood industries [citations omitted]. All of these polysaccharides are *additives*, however, and therefore they are considered less desirable in the food industry.

Lactic acid bacteria are food-grade organisms that possess GRAS (generally recognized as safe) status and are known to produce an abundant variety of exopolysaccharides (EPS) molecules [citations omitted], which *contribute to the texture* of fermented milk. [Emphasis added.]

Van Geel-Schutten at page 3008.

Unlike the recited invention, Van Geel-Schutten does not teach inducing satiety and satiation without increasing caloric intake. Thus, the recited invention is not obvious because there is no suggestion in Van Geel-Schutten that one of ordinary skill in the art would not recognize that a branched  $\alpha$ -glucan having an average molar weight of at least  $10^5$  Da and having a degree of branching of at least 8% would induce satiety and satiation without increasing caloric intake. Additionally, the invention recited in claims 15, 24 and 25 is not obvious because there is no suggestion in Van Geel-Schutten that one of ordinary skill in the art would recognize that a branched  $\alpha$ -glucan having an average molar weight of at least  $10^5$  Da and having a degree of branching of at least 10% or at least 12% and up to 24% would induce satiety and satiation without increasing caloric intake.

On page 7, the Examiner contends that the claims are not drawn to inducing satiety and satiation without increasing caloric intake. Applicants respectfully disagree because the recited  $\alpha$ -glucan would create satiety and satiation without increasing caloric intake. Moreover, Van Geel-Schutten is devoid of even the faintest hint towards inducing satiety (the feeling of having eaten hunger-satisfying levels of food) with such glucans without ingesting substantial caloric content. There is no basis to support the statement that “the administration of a food product to induce satiety flows logically” (Office Action at page 5). It is the Patent Office’s burden to provide a reason why one would reasonably expect that, after considering the cited references, the results from the recited invention would be reasonably predictable to one of ordinary skill in the art. In the Office Action, the Examiner contends that Van Geel-Schutten suggests EPS, which contributes to taste, smell or preserving food. This has nothing to do with

inducing satiety or satiation, and does not provide the requisite reason why one would reasonably predict that the recited  $\alpha$ -glucans would induce satiety or satiation.

Additionally, Van Geel-Schutten cannot be used to support a rejection under 35 U.S.C. § 103 because it is non-analogous prior art. Van Geel-Schutten is directed to modifying the texture of fermented milk with EPS, not inducing satiety and satiation. As mentioned above, taste, smell or preserving food have nothing to do with inducing satiety or satiation. Thus, there is no reason for a person of ordinary skill in the art even to consider Van Geel-Schutten when working on the recited invention.

Claims 13, 15, 16, 18-22, 24, 28, 29, 32-34 and 36 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 5,786,196 to Cote *et al.* ("Cote"). On page 8, the Office Action contends that Cote teaches a high-molecular weight alternan consisting primarily of  $\alpha$ -1,3 linked and  $\alpha$ -1,6 linked glucose residues. However, Cote is actually directed to low-molecular weight fractions. In column 2, lines 38-43, Cote states that its inventors "discovered a new enzyme, alternanase, which is effective for the endo-hydrolytic cleave of alternan, producing a thinned composition of low molecular weight fractions, which exhibit reduced viscosity and increased solubility relative to native alternan." The average molecular weight of these oligosaccharides is well below  $10^5$  Da because of the production of relatively large amounts of mono-, di- and trisaccharides as well as cyclic tetrasaccharides. Thus, Cote does not teach using a composition having an average molar weight of at least  $10^5$  Da.

On page 8, the Office Action contends that Cote teaches an alternan with approximately 10% branching, and cites Cote column 1, lines 10-17:

The polysaccharide alternan was first described by Jeanes *et al.* [citation omitted] as one of two extracellular  $\alpha$ -D glucans, referred to as fraction S, produced by *Leuconostoc mesenteroides* NRRLB-1355. The structure of this fraction was later determined by Misaki *et al.* [citation omitted] to consist primarily of an alternating sequence of  $\alpha$ -1,3-linked and  $\alpha$ -1,6-linked D-glucose residues, with approximately 10% branching.

However, Cote does not teach that the alternan can be used to induce satiety and satiation without increasing caloric intake.

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On page 9, the Examiner contends that the claims are not drawn to a method of inducing satiety and satiation without increasing caloric intake. Applicants respectfully disagree because the recited  $\alpha$ -glucan would create satiety and satiation without increasing caloric intake.

For these reasons, Applicants respectfully request reconsideration and withdrawal of this rejection.

### **Conclusion**

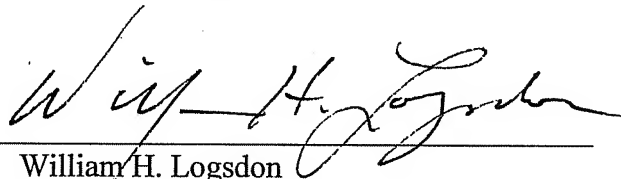
In view of the foregoing amendments and remarks, Applicants respectfully submit that pending claims 13, 15-27, 29, 32-36 and new claims 37-46 in the instant application are patentable over the prior art and are in condition for allowance. Accordingly, reconsideration and withdrawal of the rejections and objections are respectfully requested.

Should the Examiner have any questions or concerns, the Examiner is invited to contact Applicants' undersigned attorney.

Respectfully submitted,

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